A note on starshaped sets in 2-dimensional manifolds without conjugate points

ABSTRACT

Let W n be C ∞ complete, simply connected n-dimensional Riemannian manifolds without conjugate points. Assume that n=2 and S⊂W 2 is starshaped where ker S≠S. For every point x∈S\ ker S, define A(x)={y:y lies on some geodesic segment inf S form x to a point of ker S}. There is a finite collection A of all maximal A sets whose union is S. Further, ker S=∩{A:AinA}.

Keyword: Starshaped; 2-dimensional manifolds without conjugate points